

SECTION 15520

STEAM AND CONDENSATE SPECIALTIES

Edit to suit project requirements. Refer to Mechanical Standard Drawings ST6200 - ST6204 for steam details.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Steam traps
- B. Steam air vents
- C. Vacuum breakers
- D. Pressure gauges
- E. Moisture separators
- F. Pressure reducing valves
- G. Safety relief valves
- H. Condensate pressure motive pumps

1.2 DEFINITIONS

- A. Steam Distribution Piping: Steam piping upstream of the first steam shutoff valve, including valve, inside the building or steam pit.
- B. Condensate Distribution Piping: Condensate piping upstream at the first steam shutoff valve inside the building or steam pit, including the steam trap piping upstream of the first steam shutoff valve.
- C. Steam/Condensate Building Services Piping: Steam and condensate piping downstream of the first steam shutoff valve inside the building or steam pit.

1.3 SUBMITTALS

- A. Submit the following in accordance with the requirements of Section 01300:
 - 1. Catalog data of all specialties specified.
 - 2. Installation instructions for steam traps, pressure reducing valves, and safety relief valves and condensate pressure pumps.
 - 3. Operating and maintenance data of all specialties specified.

1.4 QUALITY ASSURANCE

- A. Distribution Piping: Conform to ASME B31.1-1995, Power Piping.
- B. Building Service Piping: Conform to ASME B31.9-1996, Building Services Piping.

PART 2 PRODUCTS

2.1 PRODUCT SUBSTITUTION

- A. Refer to Section 01630.

2.2 FLOAT AND THERMOSTATIC TRAP

- A. Manufacturer: Watson McDaniel, Series FT
- B. Trap: Cast iron body, with stainless steel interior parts, maximum operating pressure 125 psig at 350 degrees F.
 - 1. Capacity: [] lbs/hr condensate at [] psig pressure differential.
 - 2. Size: [] in.

2.3 THERMOSTATIC TRAP (BUILDING SERVICES PIPING)

- A. Manufacturer: Watson McDaniel, Series WT 3000
- B. Trap: Stainless steel construction, maximum operating pressure 300 psig at 750 degrees F.
 - 1. Capacity: [] lbs/hr condensate at [] psig inlet pressure
 - 2. Size: [] in.

2.4 THERMOSTATIC TRAP (DISTRIBUTION PIPING)

- A. Manufacturer: YARWAY, Series 751
- B. Trap: Stainless steel construction, maximum operating pressure 600 psig at 750 degrees F.
 - 1. Capacity: [] lbs/hr condensate at [] psig inlet pressure.
 - 2. Size: [] in.

2.5 LIQUID DRAIN TRAP

Size trap to match separator outlet drain.

- A. Manufacturer: Watson McDaniel, Series WLD1600
- B. Trap: Cast iron body with stainless steel interior parts, maximum operating pressure 125 psig at 350 degrees F.
 - 1. Capacity: [] lbs/hr
 - 2. Size: [] in.

2.6 STEAM AIR VENTS

- A. Manufacturer: Watson McDaniel, AV2000
- B. Air Vent: Stainless steel body with stainless steel interior parts, bellows operated,

suitable for steam service to 150 psig.

1. Size: 1/2 in. NPT inlet and outlet

2.7 VACUUM BREAKER

- A. Manufacturer: Durabala, No. BSSV
- B. Vacuum Breaker: Stainless steel body with stainless steel interior parts, suitable for steam service to 150 psig.

1. Size: 1/2 in. NPT inlet and outlet

2.8 PRESSURE GAUGE

- A. Manufacturer: Reotemp Instruments
- B. Gauge: Minimum 3 in. dial, 1/4 in. NPT brass bottom connection, 1 percent accuracy full scale, ABS or metal casing, with steel siphon tube.

1. Range: As specified on drawings.

2.9 MOISTURE SEPARATOR

Size moisture separator inlet to match building supply steam piping.

- A. Manufacturer: Watson McDaniel, Series WSP
- B. Moisture Separator: Steam service, cast iron construction, maximum operating pressure 125 psig at 350 degrees F.

1. Size: [] in [NPT or 125 lb flanged connections]

2.10 PRESSURE REDUCING VALVE

- A. Manufacturer: Watson McDaniel, Type DP
- B. Pressure Reducing Valve: Steam service, cast iron construction, self operating, external pilot, single seated, normally closed, maximum inlet pressure 250 psig at 450 degrees F.

1. Capacity: [] lbs/hr at [] psig inlet and [] psig outlet pressures.

2. Size: [] in. - threaded up to 2 in., flanged over 2 in.

3. Valve Spring: [3 to 25 psig, yellow] [20 to 100 psig, blue] [80-200 psig, red]

2.11 SAFETY RELIEF VALVES

- A. Manufacturer: Kunkle, [No. 6010 (threaded ends, bronze body)] [No. 252 (flanged ends, iron body)]

- B. Valve: Steam service, ASME approved, N.B. certified, lever handle, factory tested and adjusted, maximum pressure setting 250 psig at 406 degrees F.

1. Capacity: [] lbs/hr at 10 percent accumulation

2. Orifice Size: [] sq. in.
3. Size: [] in. - threaded up to 2 in., flanged over 2 in.
4. Accessories: Drip pan elbow, shipped loose, same size as relief valve outlet.

2.12 CONDENSATE PRESSURE MOTIVE PUMPS

Complete skid-mounted unit, including receiver tanks, pump(s), check valves, etc., all fully piped are available. It is recommended that a receiver tank be specified when above ground steam/condensate distribution lines feed the building. Consult with F-4 Utilities and the motive pump distributor for selection guidance. Specify ASME coded receiver tanks.

- A. Manufacturer: Watson McDaniel, [Series PMP C,(Ductile Iron Body)] or [Series PMP LS,(Carbon Steel Body)] or [Series PMP-F (Fabricated)]

PART 3 EXECUTION

3.1 INSTALLATION

- A. Install specialties in accordance with manufacturer's instructions.
- B. Minimum size steam trap 3/4 in., unless otherwise noted. Provide condensate piping no smaller than trap inlet.

END OF SECTION